



ANNUAL WATER QUALITY REPORT 2013

Where The City's Water Supply Comes From

Throughout this report customers will be able to find useful information specifically related to the City of San Bruno water system, as well as information related to drinking water in general. The primary mission of this report is to summarize the past year's water quality data that are found in the tables at the end of this brochure. You will also find valuable information about City's current operations as well as future changes or improvements to the water system. The City of San Bruno continues its commitment to provide you with safe, high quality drinking water.

The water supply for the City of San Bruno is derived from two sources. Approximately 50% of the daily water demand comes from four of the City's groundwater wells, the other half is purchased from the San Francisco Public Utilities Commission (SFPUC).

The sources of drinking water (both tap water and bottled water) include rivers, lakes, oceans, streams, ponds, reservoirs, springs, and wells. For our system, the major water source originates from spring snowmelt flowing down the Tuolumne River to storage in Hetch Hetchy Reservoir. Our pristine, well protected Sierra water source is approved by the United States Environmental Protection Agency (USEPA) and California Department of Public Health (CDPH) so that no filtration is required. In other words. Water treatments including disinfections by ultraviolet light and chlorine, pH adjustment for corrosion control, fluoridation for dental health protection, and chloramination for maintaining disinfectant residual and minimizing disinfection byproduct formation are in place to meet the drinking water regulatory requirements.

Hetch Hetchy water is supplemented with surface water from two local watersheds. Rainfall and runoff from the 35,000-acre Alameda Watershed in Alameda and Santa Clara counties are collected in the Calaveras and San Antonio reservoirs for filtration and disinfection at the Sunol Valley Water Treatment Plant. Rainfall and runoff from the 23,000-acre Peninsula Watershed in San Mateo County are stored in the Crystal Springs, San Andreas, and Pilarcitos reservoirs, and are filtered and disinfected at the Harry Tracy Water Treatment Plant.

As in the past, the Hetch Hetchy Watershed provided the majority of our total water supply, with the remainder contributed by the two local watersheds in 2013.



Water System Operations

Effective operation and maintenance of the distribution system ensures that the water maintains its quality as it travels through the system to your tap. The disinfectant residual in the water after treatment prevents the re-growth of microbial organisms during storage and transmission of water in the distribution system. The flushing of City's water mains and rotation of stored supplies also keeps the water fresh and limits the possibility for growth of such organisms.

The San Bruno Water Division conducts a comprehensive water quality assurance program. We collect over fifty samples a month throughout our system and send them to a state certified laboratory for testing. All samples have tested negative for coliforms and met all water quality standards in 2013.

Other water samples are collected periodically to check for levels of lead and copper, disinfection by-products [trihalomethanes and haloacetic acids – THMs and HAAs] and general physical components as required by state and federal regulations.

The San Bruno Water Division daily maintains water quality at our well facilities, SFPUC turnouts, storage tanks, and pump stations throughout the distribution system. These sites are monitored and maintained by City staff and our computerized SCADA (Supervisory Control and Data Acquisition) system that provides our water division managers with continuous automated water quality information.

In addition, The City of San Bruno Water Division, along with the San Mateo County Environmental Health Department administers and manages a cross-connection prevention program to eliminate possible contamination to our drinking water through backflow prevention devices. The program includes yearly testing of all city-owned backflow devices and monitoring of compliance on privately owned back flow devices*.

** A note to residents and business owners who have backflow prevention devices: State regulations require that all backflow prevention devices be tested annually by a certified inspector.*

Protecting Our Watersheds

Our annual Hetch Hetchy Watershed Sanitary Survey evaluates the sanitary conditions, water quality, potential contamination sources, and the results of watershed management activities with partner agencies including the National Park Service and US Forest Service.

We also conduct sanitary surveys every five years to detect and track sanitary concerns for the local watersheds and the approved standby water sources in the Early Intake Watershed, which includes Cherry Lake and Lake Eleanor. The latest 5-year surveys were completed in 2011 for the period of 2006-2010. These surveys identified wildlife, stock, and human activities as potential contamination sources. The reports are available for review at the CDPH San Francisco District office, (510) 620-3474.



Water Quality

The SFPUC's Water Quality Division (WQD) regularly collects and tests water samples from reservoirs and designated sampling points throughout the system to ensure the water delivered to you meets or exceeds federal and state drinking water standards. In 2013, WQD staff conducted more than 102,650 drinking water tests in the transmission and distribution systems. This is in addition to the extensive treatment process control monitoring performed by certified operators and online instruments.

As water travels over the surface of the land or through the ground, it dissolves naturally occurring minerals and, in some cases, radioactive material, and can pick up substances resulting from the presence of animals or from human activity. Such substances are called contaminants.

Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk. In order to ensure that tap water is safe to drink, the USEPA and CDPH prescribe regulations that limit the amount of certain contaminants in water provided by public water systems. CDPH regulations also establish limits for contaminants in bottled water that provide the same protection for public health.

Contaminants and Regulations

Contaminants That May Be Present In Source Water Include:

Microbial contaminants, such as viruses and bacteria, that may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.

Inorganic contaminants, such as salts and metals, that can be naturally occurring or result from urban stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming.

Pesticides and herbicides that may come from a variety of sources such as agriculture, urban stormwater runoff, and residential uses.

Organic chemical contaminants, including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production, and can also come from gas stations, urban stormwater runoff, agricultural application, and septic systems.

Radioactive contaminants, which can be naturally occurring or be the result of oil and gas production, and mining activities.

More information about contaminants and potential health effects can be obtained by calling the USEPA's Safe Drinking Water Hotline (800) 426-4791, or at www.epa.gov/safewater/lead.

Unregulated Contaminant Monitoring Rule

In May 2012, USEPA published the third Unregulated Contaminant Monitoring Rule (UCMR3) that lists a total of 28 chemical contaminants and two viruses for monitoring by some public water systems between 2013 and 2015. USEPA uses the UCMR to collect data for contaminants suspected to be present in drinking water to help determine if drinking water standards need to be developed in the future. The SFPUC and SBWD is required to monitor the 28 chemical contaminants, and completed four quarters of UCMR3 monitoring in 2013. Only 5 of the 28 contaminants were detected at very low levels as reported in the following table. In the absence of identifiable industrial sources other than chlorate, these contaminants are naturally occurring in our watersheds. Chlorate is a degradation product of the disinfectant used by the SFPUC and SBWD for water disinfection, and is a common contaminant found in water treatment facilities throughout the nation.

UCMR3 Sampling Results								
DETECTED CONTAMINANTS	UNIT	MCL	PHG OR (MCLG)	SFPUC		San Bruno		TYPICAL SOURCES IN DRINKING WATER
				RANGE	AVERAGE OR [MAX]	RANGE	AVERAGE OR [MAX]	
Chlorate	ppb	800 (NL)	NA	30 - 270	150	53 - 200	208	Degradation of disinfectant
Chromium-total	ppb	50	-100	<.2 - 0.35	<0.2	<.26- 4.7	1.08	Erosion of natural deposits; industrial discharge
Chromium-6	ppb	10	0.02	<0.03-0.15	0.09	0.30 - 4.1	0.77	Erosion of natural deposits; industrial discharge
Strontium	ppb	NA	NA	15 - 170	74	<0.10- 520	155	Erosion of natural and pipe deposits
Vanadium	ppb	50 (NL)	NA	<0.2 - 0.48	<0.2	<.067 - 57	143	Erosion of natural and pipe deposits

Reducing Lead from Plumbing Fixtures

Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. There are no known lead service lines in our water distribution system. We are responsible for providing high quality drinking water, but cannot control the variety of materials used in plumbing components. It is possible that lead levels at your home may be higher than at others because of plumbing materials used in your property.

If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Infants and young children are typically more vulnerable to lead in drinking water than the general population. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to 2 minutes before using water for drinking or cooking. If you are concerned about lead levels in your water, you may wish to have your water tested. Additional information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the USEPA's Safe Drinking Water Hotline (800) 426-4791, or at www.epa.gov/safewater/lead.

Water Conservation Awareness

This past fall and winter has been one of the driest years on record across California. At the local level, the San Francisco Public Utilities Commission (SFPUC) has asked local residents to voluntarily reduce their water consumption by 10%. In coordination with this announcement, Mayor Jim Ruane and the City are requesting the San Bruno residents and businesses conserve their water usage to help meet the 10% voluntary reduction goal, which will help to preserve our own groundwater's and Hetch Hetchy's valuable resources.

Water Conservation tips:

1. Install a low flow showerhead and take 5-minute or less showers. Free showerheads and timers available.
2. Catch water in a watering can or a bucket while waiting for water to get hot.
3. Replace your toilet with a high-efficiency model or put a water displacement bag in each toilet tank. Free displacement bags are available and rebates are available for qualifying high-efficiency toilets.
4. Fix all leaky toilets, faucets and pipes. Install low flow faucet aerators in the kitchen and bathroom. Free low flow aerators are available.
5. Scrape plates and run the garbage disposal less frequently. Compost food scraps instead.
6. Turn off the water while brushing your teeth and shaving.
7. Run only full loads in dishwashers and clothes washers. Replace these appliances with water efficient machines. Rebates are available for qualifying high-efficiency clothes washer models.
8. Water lawns/landscaping between 8:00 pm and 10:00 am. Be sure not to over water landscaping. Check and adjust sprinkler heads seasonally. Plant drought-tolerant and native plants.
9. Use a carwash facility or use a bucket of water and one short rinse to wash your car; wash on a permeable surface (grass or gravel).
10. Sweep (never hose) driveways, patios and sidewalks.



You can pick-up free water saving devices at City Hall's Public Services Counter, Monday-Friday, 8:00 am-5:00 pm: Showerheads, faucet aerators, shower timers, toilet leak tablets, and garden and landscaping guides. Rebates are available for high efficiency toilets, clothes washers. For additional information about the drought and conservation tips on the City of San Bruno's website at www.sanbruno.ca.gov and Bay Area Water Supply and Conservation Agency's website at www.bawsca.org.



Fluoridation and Dental Fluorosis

Mandated by State law, water fluoridation is a widely accepted practice proven to be safe and effective for preventing and controlling tooth decay. Our water is optimally fluoridated at 1.0 mg/l. Infants fed formula mixed with water containing fluoride at the optimal level may have an increased chance of developing tiny white lines or streaks in their teeth. These marks are referred to as mild to very mild fluorosis, and are often only visible under a microscope. Even in cases where the marks are visible, they do not pose any health risk. CDC considers it safe to use optimally fluoridated water for preparing infant formula. To lessen this chance of dental fluorosis, you may choose to use low-fluoride bottled water to prepare infant formula. Nevertheless, children may still develop dental fluorosis due to fluoride intake from other sources such as food, toothpaste and dental products. Contact your health provider or CDPH if you have concerns about dental fluorosis. Additional information can be found at CDPH website www.cdph.ca.gov/certlic/drinkingwater/pages/fluoridation.aspx or CDC website www.cdc.gov/fluoridation.



KEY WATER QUALITY TERMS

Following are definitions of key terms referring to standards and goals of water quality noted on the adjacent data table.

Public Health Goal (PHG): The level of a contaminant in drinking water below which there is no known or expected risk to health. PHGs are set by the California Environmental Protection Agency.

Maximum Contaminant Level Goal (MCLG): The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs are set by the USEPA.

Maximum Contaminant Level (MCL): The highest level of a contaminant that is allowed in drinking water. Primary MCLs are set as close to the PHGs or MCLGs as is economically and technologically feasible. Secondary MCLs (SMCLs) are set to protect the odor, taste, and appearance of drinking water.

Maximum Residual Disinfectant Level (MRDL): The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.

Maximum Residual Disinfectant Level Goal (MRDLG): The level of a drinking water disinfectant below that there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.

Primary Drinking Water Standard (PDWS): MCLs and MRDLs for contaminants that affect health along with their monitoring and reporting requirements, and water treatment requirements.

Regulatory Action Level: The concentration of a contaminant that, if exceeded, triggers treatment or other requirements that a water system must follow.

Treatment Technique (TT): A required process intended to reduce the level of a contaminant in drinking water.

Turbidity: A water clarity indicator that measures cloudiness of the water, and is also used to indicate the effectiveness of the filtration system. High turbidity can hinder the effectiveness of disinfectants.

Cryptosporidium is a parasitic microbe found in most surface water. We regularly test for this waterborne pathogen, and found it at very low levels in source water and treated water in 2013. However, current test methods approved by the USEPA do not distinguish between dead organisms and those capable of causing disease. Ingestion of *Cryptosporidium* may produce symptoms of nausea, abdominal cramps, diarrhea, and associated headaches. *Cryptosporidium* must be ingested to cause disease, and it may be spread through means other than drinking water.

Additional water quality data may be obtained by calling the City of San Bruno Water Division at (650) 616-7162

SPECIAL HEALTH NEEDS

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons, such as those with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly people, and infants, can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. USEPA/ Centers for Disease Control guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbial contaminants are available from the USEPA's Safe Drinking Water Hotline (800) 426-4791 or at www.epa.gov/safewater.

CONSUMER CONFIDENCE REPORT

A public service provided by the City of San Bruno, the Peninsula City of choice in which to live, learn, work, shop and play.

The City of San Bruno is proud to provide our customers with the annual Consumer Confidence Report (CCR). This year's report is in compliance with new regulations of the 1998 Safe Drinking Water Act (SDWA) reauthorization, which charges the U.S. Environmental Protection Agency (USEPA) with updating and strengthening the tap water regulatory program. This report presents water quality and supply information for 2013. During 2013, the City and the San Francisco Public Utilities Commission (SFPUC) monitored the water quality of both source and treated water supplies. The City of San Bruno wants you, our customer, to know that your water system has met all water quality standards established by the USEPA and the California Department of Public Health (CDPH).

HOW CAN THE PUBLIC BE INVOLVED?

Meetings of the City of San Bruno City Council begin at 7:00 PM on the second and fourth Tuesdays of each month and are open to the public. Meetings are held at the San Bruno Senior Center located at 1555 Crystal Springs Road.

If you have any questions or need further information, please feel free to contact the City of San Bruno Water Division at (650) 616-7162, or by mail at City of San Bruno Water Division, 567 El Camino Real, San Bruno, CA 94066-4247. A copy of the 2013 Consumer Confidence Report will also be posted on the City's website at www.sanbruno.ca.gov.

Decisions about SFPUC water quality issues are made from time to time in public meetings held at San Francisco City Hall, 1 Doctor Carlton B. Goodlett Place, Room 400, San Francisco CA 94102. Inquiries about these meetings may be directed to the Office of the Commission Secretary at (415) 554-3165. Additional information about the SFPUC water quality may be obtained by calling (877) 737-8297, or by going to their website at www.sfwater.org.

TRANSLATION LANGUAGES

This report contains important information about your drinking water. Translate it, or speak with someone who understands it. Este informe contiene información muy importante sobre su agua potable. Tradúzcalo o hable con alguien que lo entienda bien.

此份有關你的食水報告,內有重要資料和訊息,請找
他人為你翻譯及解釋清楚。

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他人为你翻译及解释清楚。

The map illustrates the Hetch Hetchy Regional Water System, showing the flow of water from the Tuolumne River in the Sierra Nevada to the San Francisco Bay Area. Key components include:

- Water Service Area:** Indicated by a yellow shaded region.
- San Francisco Bay Area:** Includes San Francisco, SFO, and Half Moon Bay.
- Hayward:** A major water service area.
- San Jose:** A major water service area.
- Stanislaus National Forest:** The source of the Tuolumne River.
- Reservoirs and Treatment Plants:**
 - Harry Tracy Water Treatment Plant
 - San Andreas Reservoir
 - Pilarcitos Reservoir
 - Crystal Springs Reservoir
 - Pulgas Water Temple
 - San Antonio Reservoir
 - Sunol Valley Water Treatment Plant
 - Calaveras Dam & Reservoir
 - Lake Lloyd Reservoir (Cherry Lake)
 - Lake Eleanor Reservoir
 - Hetch Hetchy Reservoir
 - O'Shaughnessy Dam
 - Kirkwood Powerhouse
 - Early Intake Diversion Dam
 - Priest Reservoir
 - Moccasin Powerhouse and Reservoir
 - New Don Pedro Reservoir
- Pipelines and Tunnels:**
 - Bay Division Pipelines Nos. 1 & 2
 - Bay Division Pipelines Nos. 3 & 4
 - Pulgas Tunnel
 - Coast Range Tunnel
 - San Joaquin Pipelines
 - Foothill Tunnel
 - Cherry Power Tunnel
 - Canyon Power Tunnel



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